



THE EASTERN IOWA DX'ER

SUMMER 1996

CLUB NEWSLETTER OF THE EASTERN IOWA DX ASSOCIATION

1996 EIDXA Officers

President: W0SR Jim Spencer
V. Pres: WBBZRL Tom Vavra
Sec/Tres: K0GT Gary Toomsen

Repeater Committee:

K0VM Al Groff
W0MJN Joe Finkstein

Membership Committee:

W0SR Jim Spencer
W0IZ Dale Repp

EIDXA Repeater:

145.190 W0MJN

DX Cluster:

147.51 WBBZRL
144.91 223.40
CR NetRom Freqs

====> EIDXA MEETING NOTICE <====

Date: 19th of July 1996 (Friday)

Time: 7:30 pm (door open at 6:30)

Place: Room 219C

Linn Hall
Kirkwood Community College
Cedar Rapids

Agenda: Business meeting. There
will be a video or two
and an opportunity for
lots of rag chewing.
And as usual, a QSY to
the local pizza parlor.

Plan on attending!!

10 Years Ago

YK Syria - OE5JTL/YK was very active from the Golan Heights

XU Kampuchea - XU1SS was still active from his refugee camp

VK0 Macquarie Island - VK0SJ handed out many SSB contacts on the nets

3C0 Pagula - 3C0A, led by TR8SA, spent over two weeks on Pagula. Their operating style frustrated many. For example, the SSB op was giving only a couple of letters of the call of the station worked, not the full call. This practice dramatically increased "insurance" calls, and probably meant there were a lot of dissappointed DXers who were "not in log."

JD Minami Torishima - 7J1ACH, operated by NJ7D, was often found on 20 cw

SV/a Mt Athos - Four I0s prepared for one week plus of "scientific" studies from the mount, but the locals were able to keep them away from "their" country.

The sunspots were just about as active in 1986 as they are now.

Minutes of the Eastern Iowa DX Association meeting of April 19, 1996

The meeting was called to order by President W0SR at 7:35 PM. All attendees introduced themselves. Guests present were: KE0FT, G3WJN, WA2WSX, and N0ZAL.

Members in attendance

KU0A K0AL WD0AWL WB0B W0EJ NB0H W0IZ K0JGH NN9K NN0L
N0LNO W0MJN KE0MO NB2N W0NB W0OF KC0Q K0RW N0SM W0SML
W0SR WE0U WR0U NY0V K0VZR NR0X KE0Y N0YVY WBBZRL

Club membership certificates were discussed. There are no more blanks, and the new members have not received one. W0SR reported the cost of purchasing more at \$130 for 100 certificates, or \$170 for 200. Several members will attempt to scan in an old certificate for production on laser printers. Attempts to reproduce a smaller number at local copy shops will also be pursued.

During a short attitude adjustment period, K0AL reported for the Humor Committee on the new footwear appearing in Iowa City.

WBBZRL reported that an attempt at reducing PacketCluster spots originating outside the United States was being tested with positive results.

W0SR reported on DXAC activities. There are no new applications being considered. Votes on the Minimum Size Rule, Minimum QSO Rule and retention of Mt Athos as a DXCC country are now being cast by the members.

The club callsign committee will meet soon. They will recommend the course of action to replace our current club callsign, KB0RYB, with a "vanity" callsign.

The President presented Heard Island first day covers to random drawing winners. The winners were: NN0L, N0ZAL, N0LNO, and W0IZ.

Their being no further business for the club, the meeting was adjourned. After a short break, NR0X presented the program on his experiences this past winter with his beverage array. Tape recordings of signals on 75 and 160 meters with and without the beverage were especially enlightening.

Tom Vavra WBBZRL
Acting Secretary

The evolution of Amateur Exam mathematics

1970 Calculate the length of a half-wave dipole antenna resonant at 7.250 MHz.

1980 M is the set of frequencies of integral khz values that define the 40 meter band. Let N be the proper subset of M defining the novice band. What is the cardinality of N?

1990 The length of an antenna for the 40 Meter band is 65 feet plus/minus what ever error your transceiver will allow. Underline the number 65.

1996 Your neighbor erects a 40 meter dipole. Discuss the diminished property valuations caused by this act. Discuss the hazards to the local wildlife by the dangerous emissions from this antenna.

Ground Rods Made Easy

I hate to give away all of the secrets in my upcoming book but since the topic is hot right now let me pass along a trick perfected by AA0RS/G3SZA.

First, I have always been concerned about using a hose with a piece of tubing since there will exist quite a gap around the copper tubing due to the "backwash" of the water and I have always questioned the effectiveness of the resulting ground. With time, temperature variation, and soil moisture variation the soil will probably fill back in around the ground rod--but probably isn't good enough for me.

Dave (AA0RS/G3SZA) is a veteran 160 operator who has mastered techniques to keep the cost down. For ground rods he takes 10ft lengths of 1/2 inch hard copper pipe and crimps the end to make a point. The pipe is just slightly over 1/2 inch INSIDE diameter so a steel rod 1/2 inch in outside diameter fits nicely. He machined a collar of about 2 inches in diameter and a half inch thick that he mounts on the rod with heavy duty set screws at the point where the collar will come into contact with the copper pipe just before the rod runs into the crimped end.

He drives the copper pipe with the steel rod inside using a fence post driver. To date it has been tried in prairie soil in eastern Colorado--soil that can vary from sand to loam to clay, but has few rocks. It works very well and the rod easily pulls out of the pipe when finished.

I will probably machine a "head" of 2 inch steel rod with a 1/2 inch hole through most of it to fit over the top of the rod. This will provide the surface area to contact the upper end of the pipe as well as provide a bigger target for either the fence post driver or a sledge hammer.

1/2 inch copper pipe is a little over \$2 per length.

The 1/2 steel rod should be less than \$10.

Material for the head is about \$2 or \$3.

Plus drilling a 1/2 inch hole about 6 inches deep

which might involve buying a \$10 drill bit (or wearing out an old one).

A regular 10ft ground rod is about \$13. So, to install 10 of them will run \$130. But to install 10 of the copper pipe grounds will run, say \$25 for the pipe and a max of \$23 for the driver and drilling materials. A net savings of \$82.

Every additional rod will cost less than \$3 instead of \$13. Net result is a lot of very efficient antennas on 160 when everybody starts driving in many ground rods because they are now so cheap.

73 John W0UN

Thanks to ABOX for the following best sellers that belong on every well rounded DXer's bookshelf:

Never Climb a Crank-up Tower	by Stubby Fengers
Receiver Incremental Tuning	by Clara Fier
The Heart of Modern Linears	by I. "Mac" Toobs
Discerning Slight Signal Improvements	by Desi Bell
What's the Best Type of Feedline?	by Coe Axle
How to Build Taller Towers	by "Rayon" Moore Robn

In response to this comment, " My Ham-IV has come apart on the tower twice now....." W7NI responds:

I believe the cause of this rather common "coming apart" of Ham-XX type rotators is because of poor mechanical alignment of the axis of the rotator, the rotator shelf, and the mast. There is an answer and I have never seen it fail.

It all has to do with order in which you tighten the bolts that hold all that stuff in place.

Think of it this way: The one thing you can't control is the alignment of the pipe section of a Rohn pipe top. Rohn controls that when they weld it together in the factory. So here is what you do.

1. Thread the mast through the tower pipe top and down into the tower about where the rotator will grab it. Temporarily secure it in place with the pipe top "set screws".
2. Mount the rotator on the mast and snug the rotator mast clamps up. This assures that the axis of rotation of the rotator is properly aligned with the axis of the mast.
3. Next put the rotator shelf in place and install the four bolts to secure the shelf to the bottom of the rotator. This assures that the plane of the shelf is correctly aligned at right angles to the axis of rotation of the rotator and mast.
4. Last, install the U-bolts that secure the shelf to the tower legs and allow them to seek their own position on the each leg.
5. Check all bolts and nuts for tightness.
6. Turn the rotator through one entire rotation and make sure it does not tend to bind in any direction. If it does, stop it there and loosen the shelf U-bolts and allow them to seek a new position. Tighten them in the new position and rotate again.

Most people I have talked to about Ham-XX rotators coming apart have pipe tops and they installed the shelf first, rotator second, and mast third. This method will almost always guarantee misalignment and excessive stress on the rotator housing as the rotator is turned. I think this stress is what causes the bolts to work loose and fall out of a Ham-XX over time. I can see where this could be a problem with a flat top and a bearing also so the same installation procedure should be used there, too.

Be Prepared

One of the local QRPers came by the other day, this one with a look of concern on his face and a lack of joy in his stride. "What's up?", we asked. The QRPer sat down and started right off with his concerns. "Don't you remember back in August when the gurus at the Jet Propulsion Lab and the folks at NASA discovered the first sunspots on the new cycle?" We had to admit that there were reports on the packet system that this had been said. And, we seemed to recall an ARRL DX Bulletin mentioning these newly discovered sunspots. "Well", the QRPer replied, "the bands have been pretty flat this fall and I just checked with Sunspot Louie. He tells me the flux has been between 70 and 75 all fall and winter. Louie says he doesn't see any indication there will be a

significant increase in the sunspot count the rest of this winter, either." The QRPer let out a long sigh and just stared at the floor. What could we say? We were faced with the QRPer pointing out scientific evidence on the one hand and the impeccable track record of Sunspot Louie on the other. The QRPer looked at us, but his eyes were only semi-focused. It was clear he was fearing a Maunder Minimum and terrified of mentioning it. And every true blue DXer knew the mere fact of speaking of such heresy could bring one on.

Son of a Gun! What could we do? We thought of taking the QRPer down to see the Leader of the Palos Verdes Sundancers. If anyone knew about solar cycles and bringing on the Great Days of DXing, it was the folks in the barrancas of Palos Verdes country. However, we had second thoughts about talking this QRPer to the location where sunspot cycles are born and raised to maturity. This QRPer did not have the full grasp of DX IS! To allow one who did not have a grasp of the Mysteries of the Ages or an understanding of the Eternal Enigmas access to the Sundancers was not something we were prepared to do.

So, when faced with a seemingly impossible situation as we often were with the locals, we hauled the QRPer up the hill to the Old Timer. We diverted the QRPer off to the Old Timer's mailbox to look for a shipment of bureau cards and quickly explained the situation to him. The Old Timer thought for a moment and waited for the QRPer to return. "No bureau cards today", he sputtered, "no mail at all." He sat down and repeated his worries of the low solar flux to the Old Timer, who listened with a poker face.

The Old Timer looked at the QRPer and said, "We are all waiting for the Golden Days of DXing to return, right? And it's never clear when the previous cycle has ended and the new one has begun until months afterwards, don't you agree?" The QRPer stood up for a moment, as if to argue, then sat back down again. "Well", he replied, "I've never been through a cycle minimum before, so I can't really say." The Old Timer glared at the QRPer rather sternly, then softened his look a bit and simply said, "DX IS! Be a Believer, and you will work the DX! You can't make DX or work the DX that was, you can only work the DX that IS! The flux will rise again . . . and until it does, work the low bands or look for the shorter openings and greyline paths. Stop worrying about the numbers. Work the DX that IS!" The QRPer was not satisfied, "But why all the excitement about a sunspot on the opposite side of the equator last August? Why isn't Sunspot Louie reporting the flux in the 80-90 range instead of the low 70's? Where's the DX?"

The Old Timer's look sharpened and he snapped back at the QRPer, "If you have to keep asking these questions, it's clear you are not one of the Deserving. You've got all the answers, yet none of the understanding. Only a DXer understands DXing and only a DXer understands the true meaning of DX IS!" The QRPer had a quizzical look on his face as the Old Timer concluded with, "Maybe, for you, The Great Days of DXing will never return! You are not prepared and you are not a Believer!" And that was it. He spun around in his chair, clicked on the rig and the linear and swung the beam west. Within 5 minutes he was tapping out a three way QSO with DU9RG and VS6BG on 17-metres! Son of a Gun! We hadn't worked Robin or Brett in over a year. We wrote down 18.073 MHz and made off our shack in a hurry. The last we saw of the QRPer he was still staring at the Old Timer, wondering why there was an opening to the far east when the flux was 72! As the Hero of Mafeking always said: "Be prepared!" Maybe this particular QRPer was only prepared to ask questions! DX IS!

Best Regards, Paul VE1UK

Packet Corner

A lightning storm in late January took the KA-node at Walcott off the air. This KA-node was the link for the WBBZRL PacketCluster node into G3WJN in the Quad Cities. For various reasons, the problem was not attacked until the end of June. G3WJN, NR0X, K0RW, WE0U, WBBZRL plus two others spent a day at the site changing antennas, feedline, and resetting the radio and tnc which the lightning had clobbered. The KA-node is now providing a solid link on 220. Thanks to all those involved.

The new cluster software which was promised for the CQWW in October 1995, was demo-ed at (1996) Dayton. There were still a number of rough edges which were to be fixed before entering the software into Beta testing. The primary programmer is committed full time to the Atlanta Olympics, so no-one is expecting software release in the near future.

Here are a few obscure cluster commands that might prove helpful.

SH/DX 'text' will search for the character string 'text' in the comments field. up to three strings
example sh/dx/d5 'rtty' 'fsk' 'baud' (find rtty spots last five days)
 sh/dx 20 'eu' (find 20M Europe IOTA spots)

DIR/SUBJ text will search for 'text' in message subjects
example dir/subj vk0 (find messages about VK0WH)

Tid-Bits

WD0AWL - You should have seen Terry as that van went around him on his trip back from dayton

W0NB - Congratulations to Jim on his induction into the Iowa Broadcasters Association Hall of fame

N0LNO - Bill upgraded to Advanced - Congratulations

AD0F - NB2N got back his former call, and will be trying for a 1 x 2

K0RW - John is in the process of building a new house, and has told his wife not to worry about heat this coming winter, he will keep the amp running.

KU0A - Nelson has finally cracked the bureaucratic pileup and is erecting a tower

Seen at Dayton W0SR, N0YVY, W0EJ, W0ZKG, NN0L, NR0X, WBBZRL, WD0AWL, KE0MD and K0JGH

WBBZRL - had his name drawn for a prize at the DX Dinner. He won a set of European size air mail envelopes

NR0X - Heinz has worked 104 countries on 160 meters since putting up an antenna in November

AB0M - Vern has discovered his dependence on packet now that his dumb terminal quit working.

W0SR - Almost finished moving the shack. Then he can listen to the power line noise again

A REAL HAM

How can you spot a real ham ? The following are telltale signs:

1) A real ham will take his absolutely mint condition HT-32B to a hamfest and try to sell it for "\$248 firm". He will then sell this same transmitter for \$18.75 to the 12 year-old neighbor, because thats all the kid can afford. He will also throw in a expensive coaxial relay at no charge.

2) A real ham is incapable of throwing away a working meter movement, whether he will ever use it or not.

3) A real ham is slowly collecting parts for at least four projects, one of which has already appeared in the "25 Years Ago" column in QST.

4) A real ham can pick out a BY prefix that is S-1, from underneath a six state-sideband signals reading S-9+20 Db.

5) A real ham knows that antennas erected on calm days and during daylight hours will never perform as well as those erected in the dark and during a blizzard.

6) A real ham wishes that his tower was at least 10 feet taller.

7) Given a choice between Heard Island and Waikiki Beach for a vacation, a real ham will chose Heard Island. He will not understand why other people think this is peculiar !

De Chicago FM Club, IL, as reported in World Radio, Feb. '89
73 De WB0ZKG.....

Running coax up the tower by K7LXC

The main reason to run cables down the outside of a tower is ease of installation and removal. Running cables up the inside of a tower takes 2 or 3 times as long because you have to get the haul rope down thru the tower successfully and carefully feed everything in. Removal is a little easier but care in handling the cables is recommended to prevent kinking.

A possible scientific reason to run them inside is that the tower may act as a Faraday shield against lightning. Cables run inside conduit are thus protected; perhaps a tower acts as a big piece of "conduit". On the other hand, a tower is probably too "leaky" to keep the lightning out and the cables arc anyway.

Another reason to run them inside is that they are more out of the way of the tower climber/worker. This scenario is avoided if you run all the cables down one leg. The designated leg is pretty busy with cables leaving the other two relatively unadorned -- and free from climbing impediments.

BTW, tower wind load ratings typically have some allowance for cables. Rohn uses one run of 5/8 inch cable for 25G and 1 run each of 1/2 inch and 7/8 inch for 45G.

(Steve, K7LXC, previously the author of the tower column in the National Contest Journal, now authors a column in CQ Contest. He provides tower climbing tools and accessories through his new business, Tower Tech.)

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Dates to mark on the calender

Now	ZS8IR	Marion Island (until Jul 97)
July 13-14	IARU HF	World Championship
July 19	EIDXA	meeting at Kirkwood Community College
Sept 28		Fleamarket at NCOP's
All Summer		Antenna projects that cannot wait until Winter
Jan 12-28	VK0	Heard Island

Many thanks to the following for supplying items for the newsletter:
W0EJ N0YVY K7LXC W0ZKG W0UN A80X W7NI and VE1UK